

Propagation of electromagnetic pulse . . .

S/754/62/000/001/003/006

for different types of ground, for different sources to the source, and for different pulse carrier frequencies. Real and also perfectly conducting ground is considered, so that the purely geometrical factor of the earth's curvature can be taken into account.

There is one table and five figures. A. V. Manankov and Yu. I. Kyullenen participated in the calculations. Of the twelve references, the latest English-language ones are by: J. R. Wait (Canad. J. Phys. 35, 1957, 1146; J. R. Johler, L. C. Walters, IRE Trans., AP-7, 1959, No. 1; J. R. Johler, W. J. Keller, and L. C. Walters, National Bureau of Standards, 1958; J. B. Keller and R. M. Lewis, IRE Trans. AP-6, 1958, No. 1).

Card 2/2

S/754/62/000/001/003/006

AUTHOR: Gyunnen, E. M., Makarov, G. I.

TITLE: Propagation of electromagnetic pulse above a spherical earth

PERIODICAL: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln. no 1.  
1962, Rasprostraneniye radiovoln. 133-142.

TEXT: The curvature of the earth and its finite conductivity cause the waveform of an electromagnetic pulse to vary during the course of propagation, and the dependence of this variation on the character of the path is of great theoretical and practical interest. Previous treatments of the problem were made under highly simplifying assumptions.

In this article the formal solution of the problem of the propagation from a dipole carrying a sinusoidal current turned on at the instant  $t = 0$  is evaluated numerically (with a high speed digital computer) and the results obtained are compared with the accumulated numerical data of the stationary theory of radiowave diffraction around the spherical earth in the shadow region. This gives a sufficiently good idea of the extent to which the primary pulse becomes distorted during the course of its propagation. The time variation of the field is investigated

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000617800050-6

OYUNNINEN, E.M.; MAKAROV, G.I.

Asymptotic representations of Whittaker functions. Probl.dif.i  
ruspr.voln. 1:24-62 '62.  
(Ionospheric radio wave propagation)  
(Functions, Hypergeometric) (MIRA 15:6)

G YUNNINEN, E. M.

## TABLE I: BOOK EXPLOITATION

SOV/2660

16(1) *Vestnroyazy matematicheskoy "Svord."* 3rd. Moscow, 1956  
Trudy. T. 4: Kratkoye soderzhanie seshionnykh dokladov. Doklady  
nauk po matematicheskym i mehanicheskym voprosam (Transactions of the 3rd All-Union Mathe-  
matical Conference in Mechanics). Vol. 4: Summary of Sessional Reports.  
Reports of Conference of Scientists (Scientist) Moscow, Izd-vo AN SSSR, 1959.  
27, p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Auth. Ed.: G.I. Shevelevchenko; Editorial Board: A.A. Abramov, V.O.  
Bolyaritsky, A.Z. Vasil'ev, B.V. Medvedev, A.D. Myshkin, S.M.  
Nikolskiy (Samp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A.  
Rybnikov, P. L. Ul'yanov, V.A. Usopskiy, N.G. Chetayev, G. Ye.  
Shilov, and A.I. Solntsev.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-  
Union Mathematical Conference, held in June and July 1956. The  
book is divided into two main parts. The first part contains a series  
of papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The  
second part contains the text of reports submitted to the editor  
by non-Soviet scientists. In those cases when the non-Soviet scientist  
did not submit a copy of his paper to the editor, the title  
of the paper is cited and, if the paper was printed in a previous  
volume, reference is made to the appropriate volume. The papers,  
both Soviet and non-Soviet cover various topics in number theory,  
algebra, differential and integral equations, function theory,  
functional analysis, probability theory, topology, mathematical  
problems of mechanics and physics, computational mathematics,  
mathematical logic and the foundations of mathematics, and the  
history of mathematics.

Makarov, G.I. (Leningrad), V.S. Buldyrev (Leningrad), K.M. Gromov (Leningrad), I.A. Mel'nik (Leningrad). Quantitative study of the nonstationary diffraction of waves from spherical and cylindrical regions. 120
Pomeranchuk, I.Ya. (Moscow). The turning to zero or renor- malized charges in theories with point interaction. 120
Rumer, Yu.B. (Novosibirsk). Five-dimensional optics. 120
Sorokin, O.A. (Moscow). On the theory of the reflection of elastic waves from a curvilinear boundary. 122
Stavroulov, K.P. (Moscow). Relativistic mechanics and the electrodynamics of continuous media. 122
Khodzhabeyev, L.S. (Stalinabad). Singular functions of quan- tum field theory in n-dimensional pseudo-Euclidean space. 124

Card 23/34

SOV/58-59-9-21044

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 234 (USSR)

AUTHORS: Molchanov, A.P., Gyunnen, E.M., Mel'nikov, A.V., Molchanov, A.I.P.,  
Myasnikov, L.L., Rysakov, V.N., Skripov, F.I., Filippov, M.M.

TITLE: Results of the Observations of the Solar Eclipses of 1952 and 1954 at  
a Wavelength of 3.2 cm

PERIODICAL: V sb.: Polnyye solnechn. zatmeniya 25 fevr. 1952 g. i 30 iyunya 1954 g.  
Moscow, AN SSSR, 1958, pp 331 - 332

ABSTRACT: The authors give the results of the radio observations of the solar  
eclipses of 25 Feb. 1952 and 30 June 1954. The residual intensities  
of the sun's radio emission amount to < 4% and 0.98% respectively.

Card 1/1

The effect of complex shape ...

29589

S/108/61/016/011/005/007  
D201/D304

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications im. A.S. Popov) [Abstractor's note: Name of Association taken from 1st page of journal]

SUBMITTED: January 5, 1961

Card 5/7

W

29589

S/108/61/016/011/005/007  
D201/D304

## The effect of complex shape ...

the  $(n + 1)$ -th pulse. The evaluations were made on a fast electronic computer, Eq. (3) being integrated by the Runge-Kutta method. The results obtained are given in Table 1 and show that the phase  $\varphi_n$  depends little on  $\mu$  and  $\gamma$ ,  $\gamma$  determining only the number of pulses required for attaining phase  $\varphi_n$  ( $\gamma$  characterizes the external force acting on the oscillator). The obtained values  $\varphi_n$  were compared with the phase  $\Psi$  of the fundamental of the sequence of pulses  $A(\tau)$  and the results are given in Table 2. Finally, if the force acting on the oscillator has the form of bursts of oscillations, whose amplitude and detuning are small and slowly varying, the steady state phase of the oscillator may be determined by the method of P.N. Zanadvorov (Ref. 1: Radiotekhnika, v. 3, no. 2, 1958). There are 2 tables, and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P.W. Fraser, PIRE, v. 45, no. 9, 1957.

Card 4/7

29589

S/108/61/016/011/005/00/  
D201/D304

## The effect of complex shape

dition  $(0.8 + 0.02 \tau_k) \tau_k = 2k\%$  so that when  $A(\tau_k) = 0$ ,  $\tau = \tau_k$ ,  $k = 1, 2, 3, 4, 5$  so that  $\tau_1 = 6.724$ ,  $\tau_2 = 12.067$ ,  $\tau_3 = 16.640$ ,  $\tau_4 = 20.002$ ,  $\tau_5 = 24.394$ . The analysis has shown that to a great degree of accuracy the amplitude and phase of the oscillator may be said to be established towards the end of the pulse disturbance; between the pulses the oscillations may be assumed to be harmonic and

$$\left. \begin{aligned} x &= x_m \cos (\tau - \varphi_n) \\ \frac{dx}{d\tau} &= -x_m \sin (\tau - \varphi_n) \\ x_m &= \sqrt{x^2 + \left(\frac{dx}{d\tau}\right)^2} \\ \varphi_n &= \tau + \arctan \frac{dx/d\tau}{x} \end{aligned} \right\} \quad (5)$$

hold, where  $\varphi_n$  - the initial oscillator phase until the arrival of  
Card 5/7

29589 S/108/61/016/011/005/007  
 The effect of complex shape ... D201/D304

sionless time;  $\bar{S}_0$  - average reduced slope of the valve.  $\mu$ ,  $\gamma$ ,  $S_0$  and  $\beta$  - constants, then the fundamental equation may be represented as

$$\frac{d^2x}{d\tau^2} + x = -\mu \left\{ \delta - M\omega_0 S_0 \left[ 1 - \frac{2}{\pi} \operatorname{arc tg} \beta x_m \right] \right\} \frac{dx}{d\tau} + \gamma A(\tau). \quad (3)$$

Practical values are now assigned to the parameters of (3) thus:

$\delta = 0.8$ ;  $M\omega_0 S_0 = 1.12$ ;  $\beta = 0.422$ ;  $\mu = 10^{-2}$  and  $10^{-3}$ ,  $\gamma = 0.1$  and

0.01 are the values resulting from practical assessment of the valve parameters and regime. The acting force has been taken as having the form of consecutive "distorted sinusoidal pulses"  $A(\tau)$  with linear variation of amplitude and initial phase. Thus  $A(\tau)$  had the form of

$$A(\tau) = \begin{cases} 0.08(\tau + 3) \cdot \sin [\tau(0.8 + 0.02\tau)], & 0 < \tau < \tau_k, \\ 0, & \begin{cases} \tau < 0, \\ \tau > \tau_k, \end{cases} \end{cases} \quad (4)$$

where  $\tau_k$  is determined and again from an arbitrary and logical con-

Card 2/7

9.3260 (1139,1159)

29589 S/108/61/016/011/005/007  
D201/D304

AUTHORS: Gyunnen, E.M., Zanadvorov, F.N., Kotik, I.P., and Makarov, G.I.

TITLE: The effect of a complex shape periodic signal on a free-running oscillator

PERIODICAL: Radiotekhnika, v. 16, no. 11, 1961, 59 - 44

TEXT: The pure theory of phasing of oscillators presents difficulties which make the solutions of its problem practically impossible. In the present article, the author considers the solution of this problem in its numerical context, by means of a fast electronic computer. Such a problem, as opposed to the purely analytical one, is stated to be comparatively easy, but the quasilinear method of analysis is applied for simplification and numerical substitution of the equation of the oscillator, upon which acts the external force  $A(\tau)$ . If  $x$  is the voltage at the grid, reduced to the amplitude  $x_m$  of the steady state oscillations at the grid,  $\omega_0$  and  $\delta$  - the frequency and attenuation of the oscillating circuit,  $\tau = \omega_0 t$  - dimensionless variable.

Card 1/7

GYUNNINEN, E. M.

GYUNNINEN, E. M.

"Electromagnetic and Acoustic Waves in Mediums Bounded  
by Parabolic Surfaces." Leningrad Order of Lenin State U imeni A. A.  
Zhdanov, Lenigrad, 1955. (Dissertation for the Degree of Candidate  
in Physical and Mathematical Sciences)

SO: M-955, 16 Feb 56

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Urotropine compounds with silver chromate. Zbir. nauchn. trudov.  
10 no.12:2606-2610 D '65. (KIRA 19:1)

1. Krymskiy pedagogicheskiy institut imeni Frunze.

GYUNNER, E.A.; MEL'NIKOVENKO, L.M.

Refractometry of precipitation reactions in the systems A - B - D  $H_2O$ .  
Zhur. neorg. khim. 10 no.9:2175-2179 S '65. (MIRA 18:10)

1. Krymskiy pedagogicheskiy institut imeni Frunze.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000617800050-6

СЕМЕНОВ, Н.Н.; СМОЛЕНСКАЯ, Н.А.; ОРЛЯНКОВА, А.К.; ТОКАЛОВА, Е.В.

Reaction of silver nitrate with thiourea and allylisothiourea in  
methanol solutions. Zhar. neorg. khim. 10 no. 12 (1965) p. 3052  
(Russ.) (Engl. trans.)

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Types of refractograms in the investigation of reactions in  
the systems electrolyte I - electrolyte II - water and  
electrolyte - nonelectrolyte - water according to the continuous  
measurements method. Zhur. ob. khim. 35 no.10:1695-1702 O '65.  
(MIA 18:10)

1. Krymskiy pedagogicheskiy institut imeni M.V. Frunze.

GUNNER, E.A.; MEL'NICHENKO, L.M.

Reaction of mercury halides with uretropine in aqueous and methanol  
solutions. Ukr. khim. zhur. 31 no.6:632-633 '65. (MTR 18:7)

I. Krymskiy pedagogicheskiy institut imeni Frunze.

GYUNNER, E.A.; MEL'NICHENKO, I.M.

Complex formation in the system silver nitrate - urotropine -  
methanol. Zhur. neorg. khim. 9 no.5:1297-1298 My '64.  
(MIRA 17:9)

1. Krymskiy pedagogicheskiy institut imeni M.V. Frunze.

GYUNNER, E.A.

Refractometry of complex-forming reactions in aqueous solutions.  
Zhur. neorg. khim. 8 no.10:2334-2340 O '63. (MIRA 16:10)

(Complex compounds) (Refractometry)

GYUNNER, E.A.

Complex formation in the system silver nitrate - urotropine - water.  
Zhur.neorg.khim. 8 no.2:423-427 F '63. (MIRA 16:5)

1. Krymskiy pedagogicheskiy institut imeni M.V.Frunze.  
(Silver nitrate) (Hexamethylenetetramine)

GYUNNER, E.A.

Study of complex formation in the system BeSO<sub>4</sub> - CH<sub>3</sub>CONH<sub>2</sub> - H<sub>2</sub>O  
by physicochemical analytical methods. Zhur.neorg.khim. 7  
no.6:1431-1433 Je '62. (MIRA 15:6)

1. Krymskiy pedagogicheskiy institut imeni M.V.Frunze.  
(Beryllium sulfate) (Acetamide) (Complex compounds)

GYUNNER, E.A.

Molecular compounds of urotropine. Part 18 Molecular compounds  
of urotropine with certain organic acids in aqueous solutions.  
Zhur. ob khim. 31 no.2:354-358 F '61. (MIRA 14:2)

1. Krymskiy gosudarstvennyy pedagogicheskiy institut imeni M.V.  
Frunze.  
(Hexamethylenetetramine)

Study of the Interaction of Beryllium S/078/61/006/001/017/019  
Sulfate With Urea and Thiourea by the Method B017/B054  
of Physicochemical Analysis

6 Soviet, 1 French, 1 German, and 1 Indian.

ASSOCIATION: Krymskiy gosudarstvennyy pedagogicheskiy institut im.  
M. V. Frunze (Crimean State Pedagogical Institute imeni  
M. V. Frunze)

SUBMITTED: February 20, 1960

Card 2/2

S/078/61/006/001/017/019  
B017/B054

AUTHOR: Gyunner, E. A.

TITLE: Study of the Interaction of Beryllium Sulfate With Urea and Thiourea by the Method of Physicochemical Analysis

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,  
pp. 236 - 238

TEXT: The author studied the systems  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CO}$  -  $\text{H}_2\text{O}$  and  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CS}$  -  $\text{H}_2\text{O}$  physicochemically by determining density, refractive index, and specific electrical conductivity. The isothermal lines of refractive index, viscosity, specific electrical conductivity, and density are graphically shown in Figs. 1 and 2. A molecular compound of the composition  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CO}$  was established in the system  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CO} - \text{H}_2\text{O}$ . The molecular compound  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CS}$  was isolated in the system  $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CS} - \text{H}_2\text{O}$ . There are 2 figures and 9 references:

Card 1/2

An Equation for the Density of Binary Aqueous Solutions

SOV/76-33-3-28/41

ASSOCIATION: Krymskiy pedagogicheskiy institut im. M. V. Frunze, Simferopol'  
(Crimean Pedagogical Institute imeni M. V. Frunze, Simferopol')

SUBMITTED: August 23, 1957

Card 3/3

SOV/76-33-3-28/41

## An Equation for the Density of Binary Aqueous Solutions

"solutions of the first type" (comprising 65 of the solutions under investigation, among them KCN (Fig 2),  $K_2Cr_2O_7$ , NaCNS, NaJ, etc); "solutions of the second type", in which  $B(p)$  is represented as a broken straight line, may be divided into two groups: the straight line consists of rectilinear sections (Fig 3) (which holds for 94 of the investigated substances), or the straight line includes a curved section ( $Cr_2(SO_4)_3$ ,  $H_2SeO_4$ ,  $HNO_3$ ,  $H_3PO_4$ ,  $KH_2PO_4$ , and  $ZnCl_2$ ). The breaks of the iso-thermal line  $B(p)$  for HCl solutions and  $K_2CO_3$  solutions (Fig 4) correspond to the hydrates  $HCl \cdot 18H_2O$  ( $p = 0.101$ ),  $HCl \cdot 6H_2O$  ( $p = 0.252$ ), and  $K_2CO_3 \cdot 18H_2O$  ( $p = 0.299$ ). Further, they are not shifted by temperature change, while the breaks of the iso-thermal line  $B(p)$  for the solutions of LiCl, NaCl, and  $NaNO_3$  are shifted by rising temperature toward lower concentrations. It is assumed that water is capable of forming two types of hydrates, comparatively stable and unstable ones. There are 5 figures, 2 tables, and 12 references, 7 of which are Soviet.

Card 2/3

5(4)

AUTHOR:

Gyunner, E. A.

SOV/76-33-3-28/41

TITLE:

An Equation for the Density of Binary Aqueous Solutions  
(Uravneniye plotnosti dvoynikh vodnykh rastvorov)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 683-687  
(USSR)

ABSTRACT:

An empirical equation for the density of binary aqueous solutions was established by the statistical method for the evaluation of checking data (Ref 9). The author checked solutions of 165 compounds, four of them being nonelectrolytic. The equation is expressed as follows:  $d = d_0 - \ln [1 - B(p) p]$  (1), where

$d$  and  $d_0$  = density of the solutions and the solvent,  $p$  = weight percentage of the dissolved substance,  $B(p)$  = "function of density". Function  $B(p)$  can represent a straight line or a "broken" straight line:  $B(p) = B(0) + \beta p$  (2);  $B(0)$  and  $\beta$  = coefficients which are empirically determined for each dissolved substance. The values of  $d$  in NaJ- and KHS solutions obtained by the aforesaid equation (Tables 1,2) agree well with experimental values. Solutions in which  $B(p)$  is represented by a straight line are named

Refractometric Investigations of the Reactions in  
Solutions

78-3-6-18/30

- c) reciprocal exchange, accompanied by a change of the ionic charge without change of the number of ions in the solution.

Typical examples were given and the corresponding refractograms of these reactions were recorded. The complex formation in the solution may be determined by refractometric methods. It was shown that conclusions with respect to the quantitative character of the reactions can also be drawn by the refractometric investigations with each reaction of interaction, accompanied by a decrease of the ionic number or according to the change of the ionic charge.

There are 2 figures, 2 tables, and 4 references, 3 of which are Soviet.

SUBMITTED: April 8, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Solutions--Chemical reactions
2. Refractometers--Application
3. Exchange reactions--Analysis
4. Oxidation-reduction reactions--Analysis

AUTHORS: Danil'chenko, P. T., Gyunner, E. A., Markina, T. D. 78-3-6-18/30

TITLE: Refractometric Investigations of the Reactions in Solutions (Refraktometricheskoye issledovaniye reaktsiy v rastvorakh)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1398-1402 (USSR)

ABSTRACT: Reactions in aqueous solutions may occur as exchange-or reduction-oxidations, or accompanied by the formation of complexes. The changes of the refractive index may also take place with these reactions. The analyses taking account of the change of the refractive index, are described as refractometric methods. Refractometric investigations comprise three types of reactions:  
a) reciprocal exchange, without change of the number of ions in the solution;  
b) reciprocal exchange, accompanied by a reduction of the number of ions in the solution;

Card 1/2

NIKOLOV, G.S.; GYUNCHEV, K. (gorod Svishchev, bolgariya)

Rare case of acute lymphogranulomatosis. Arkh. pat. no. 42165 '63.  
(MIRA 17:11)

1. Iz Ob'yedinennoy gorodskoy bol'nitsy (glavnyy vrach - doktor Nedelya Vodenicharova), gorod Svishchev, bolgariya.

BABAYAN, G.G.; GAIKSYAN, Z.B.; GYONALYAN, A. ; MARYAN, V.L.

Solubility diagram of the system Na<sup>+</sup>H ~ Li<sup>+</sup>H ~ H<sub>2</sub>O at 0° and 20°C. Izv. AN Arm SSR. Khim. nauki 16: no. 5 p. 545-563. (1961-1968)

1. Institut khimii Gosudarstvennogo komiteta tsvetnykh i Chernykh metalley SSR.

BABAYAN, G.G.; GYUNASHYAN, A.P.

Thermographic study of some sodium and potassium metasilicates.  
Izv. AN Arm. SSR. Khim. nauki 16 no.4:327-334 '63. (MIRA 16:9)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.

*Soyuzyashchaya, I*

AREV, P.  
Bulgaria (in copy); Given Name

3

Country: Bulgaria

Academic Degrees: not indicated

Affiliation: not indicated

Source: Sofia, Biogizika, No 2, Mar/Apr 61, pp 27-28

Date: "Salmonellae Bispebjerg, Salmonellae Senftenberg and  
Salmonellae Richmond Have Been Separated in Bulgaria."

Co-authors:

APOSTOLOV, P.

MANDULOV, V.

GYUMYUSHEVA, O.

ALCHUDZHAN, A.A.; GYUL'ZADYAN, A.A.; MESROPYAN, K.G.; ASHIKYAN, M.A.

Chemical treatment of tailings of Svarantsak iron-olivinite ores  
obtained by the concentration by magnetic separation. Part 2:  
Solubility of tailings in sulfuric and nitric acids. Izv. AN  
Arm.SSR. Khim.nauki 18 no.1:96-103 '65.

(MIRA 18:5)

1. Yerevanskiy politekhnicheskiy institut imeni Karla Marks'a,  
kafedra obshchey khimii.

GYUL'NAZARYAN, I.M.; ZHEBROVSKAYA, I.F.

Study of heredity in patients with cerebral atherosclerosis. Trudy  
Gos. nauchno-issl. inst. psikh. 22:108-116 '60. (MIU 15:1)

1. Klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov)  
Gosudarstvennogo nauchno-issledovatel'skogo instituta psichiatrii  
Ministerstva zdravookhraneniya RSFSR i Tambovskaya psikhoneurologicheskaya bol'nitsa (glavnnyy vrach zasluzhennyy vrach RSFSR A.M.  
Pisarnitskaya).  
(CEREBRAL ARTERIOSCLEROSIS) (HEREDITY OF DISEASE)

GYUL'NAZARYAN, I.M.; ZHEBROVSKAYA, I.F.

Role of psychogenia in the etiology of mental disorders in cerebral atherosclerosis. Trudy Gos. nauchno-issl. inst. psikh. 22:98-107 '60. (MLKA 15:1)

1. Klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psichiatrii Ministerstva zdravookhraneniya RSFSR i Tambovskaya psikhoneurologicheskaya bol'nitsa (glavnnyy vrach - zasluzhennyy vrach RSFSR A.M. Pisnaritskaya).

(CEREBRAL ARTERIOSCLEROSIS)  
(MENTAL DISORDERS)

GYUL'NAZARYAN, A.

Improve industrial planning. Prom.Arm. 5 no.12:5-9 D '62. (MIR 16:2)  
(Armenia—Industrial organization)

DOGADKIN, B.A.; DOBROMYSLOVA, A.V.; BELYATSKAYA, O.N.; GYUL'NAZAROVA, T.A.

Investigation of the premature vulcanization (scorching) of rubber mixtures. Part 1: Structural changes in unfilled and filled mixes during heating. Vysokom.sod. 3 no.4:497-504 Ap '61.

(MIRA 14:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.  
(Vulcanization)

ABAYEVA, B.T.; OKINSHEVICH, N.A.; AGAFONOV, A.V.; SIDLYARENOK, F.S.;  
KAZANSKIY, V.L.; GYUL'MISAR'HAN, T.G.; SUYETENKO, L.P.;  
GILYAZETDINOV, L.P.

Using extracts as stock for the production of active and semi-active carbon black. Neftper. i neftekhim. no.5:30-33 '64.

(MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva, Kuybyshevskiy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

Study of ...

S/190/61/003/004/001/014  
B101/B207

chimney soot this effect was not observed. Heating of carbon black in N<sub>2</sub> to eliminate the oxygen-containing groups, had no effect upon this phenomenon, led, however, due to the pH increase, to a quicker sulfur addition. The network formation with fine-disperse carbon black was also observed in mixtures with natural rubber. Thus, scorching is caused by interaction of rubber with sulfur and other vulcanizing substances. The only means of a successful elimination is an inhibition of the mentioned processes. V. A. Zhukova participated in the experiments. There are 6 figures, 2 tables, and 14 references: 2 Soviet-bloc and 12 non-Soviet-bloc. The 2 references to English language publications read as follows: M. L. Studebaker, L. G. Nabors, Rub. Age 80, 5, 837, 1957; W. H. Watson, Industr. and Engng. Chem. 47, 1281, 1955.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov), NII shinnoy promyshlennosti (Scientific Research Institute of Tire Industry)

SUBMITTED: June 10, 1960

Card 4/7

Study of ...

S/190/61/003/004/001/014  
B101/B207

Table 1.

Type of carbon black	pH of the carbon black suspension in water-alcohol mixture	specific surface $\text{m}^2/\text{g}$	scorching time min
Carbon black	3.2 - 3.3	90	94
Carbon black, reduced	8.4 - 8.6	-	62
Chimney soot	8.0 - 8.2	30	62
Chimney soot oxidized	6.2 - 6.4	-	98
Spray burner black	7.4 - 7.6	25	70
Thermal carbon black	7.4 - 7.6	15	76

Fig. 4 shows the effect of the pH of carbon black upon the sulfur addition. The effect of the degree of dispersion of carbon black manifested itself by the fact that carbon black, already when masticated with rubber, forms rubber - black gel (approximately 42%), while in the case of coarse-disperse

✓

Card 3/7

Study of ...

S/190/61/003/004/001/014  
B101/B207

agreement with those obtained by the BP-1 (VR-1) viscosimeter. Moreover, the kinetics of sulfur addition and the change of the solubility in benzene were tested. A) Non-filled mixtures. The experiments were made with a mixture of (in weight %) 100 CKC-30A (SKS-30A) rubber, 3 sulfur, 1.2 N,N-diethyl-benzothiazyl sulfenamide, 1.2 dibenzothiazyl disulfide; 2 zinc oxide, 2.0 stearic acid. Fig. 1 shows the results obtained. The curve of S addition does not go through the origin of coordinates, since the initial rubber contains already 0.2% S. In the scorching point, the S addition amounts to about 0.5%. B) Filled mixtures. Carbon black served as filler. The mixture consisted of (in weight %) 100 SKS-30A rubber, 3.0 sulfur, 1.2 sulfenamide ST (BT), 1.2 altax, 5.0 ZnO, 1.0 colophonium, 3.0 rubrax, 1.0 stearic acid, 5.0 polydienes, 40 spray burner black, 15.0 carbon black. The results are listed in Fig. 2. In the presence of highly surface-active carbon black, the scorching point occurred already after the addition of 0.25-0.30% sulfur, while in the presence of coarse-disperse carbon black, 0.4-0.5% S is added. C) The authors studied the effect exerted by various types of carbon black the properties of which are listed:

Card 2/7

S/190/61/003/004/001/014  
B101/B207

AUTHORS: Dogadkin, B. A., Dobromyslova, A. V., Belyatskaya, O. N.,  
Gyul'-Nazarova, T. A.

TITLE: Study of the early vulcanization (scorching) of rubber mixtures. 1. Structural changes of non-filled and filled mixtures when heated

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961,  
497-504

TEXT: The present study deals with the structural changes occurring in the scorching of rubber mixtures as well as with the effect of various factors upon this process. The investigation was conducted by means of a plastometer of the NIIShP (Scientific Research Institute of the Tire Industry) at 120°C. The mixtures were heated in the plastometer for seven minutes and then, at constant pressure, pressed through a capillary; every two minutes, the quantity leaving the capillary was weighed. The moment at which no more mixture left the capillary, was defined as scorching point. Preliminary tests proved that the data obtained by means of the plastometer are in good

Card 1/7

BABAYAN, G.G.; SAYAMYAN, E.A.; GYUNASHYAN, A.P.; OGANESYAN, E.B.; VOSKANYAN,  
S.S.

Solubility in the system  $K_2SiO_3 - K_2CO_3 - H_2O$  at  $20^{\circ}C$ . Izv. AN  
Arm.SSR. Khim.nauki. 16 no.3:221-228 '63. <sup>0</sup>  
(MIRA 17:2)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.

ALCHUDZHAN, A.A.; GYUL'ZADYAN, A.A.; MESROPYAN, K.G.; ASHIKIAN, M.A.

Chemical treatment of the tailings of Svarn iron-olivinite  
ore obtained by magnetic separation dressing. Part 3: Treatment  
of hydrochloric solutions of ammonium magnesium tailings by  
the carbonate method. Izv. AN Arm. SSR. Khim. nauki 18 no.3:  
313-324 '65.  
(MIR 18:11)

1. Yerevanskiy politekhnicheskiy institut imeni Karla Marksa,  
kafedra obshchey i analiticheskoy khimii. Submitted May 9,  
1964.

L 43771-66 EWT(m)/EWP(j)/EWP(t)/ETI TIP(s) ID/RM  
ACC NR: AP6015643 (A) SOURCE CODE: UR/0413/66/000/009/0054/0054

INVENTOR: Gyul' misaryan, T. G.; Gilyazetdinov, L. P.; Azhishchev, A. F.;  
Zavidov, V. I.

ORG: none

TITLE: Method of obtaining furnace carbon black. Class 22, No. 181215  
[announced by Scientific Research Institute of the Tire Industry (Nauchno-issledo-  
vatel' skiy institut shinnoy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966,  
54

TOPIC TAGS: hydrocarbon, carbon black, furnace ~~carbon black~~

ABSTRACT: An Author Certificate has been issued for a method of obtaining a  
furnace carbon black by decomposing liquid hydrocarbon raw material at 1100—  
1600°C using haloid-containing components. To improve the properties of carbon  
black, the haloid-containing components are added to the raw materials prior to  
decomposition. Oil distillates are suggested as the hydrocarbon raw material for  
decomposition. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 07Dec63/

Card 1/1 AM 07/

UDC: 678.046.2

L 12807-66

ACC NR: AP5028680

initial sulfur-containing phenol extract of catalytic gas oil, and also mixtures of thermal gas oil and green oil (in the ratio of 60:40) can be used in the production of activated PM-70 furnace black in plants equipped with cyclone reactors, a dry system being used for trapping the black. Orig. art. has: 2 figures and 3 tables.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 006

jw

Card 2/2

L 12807-66    EWT(m)/EWP(j)/EWP(t)/EWP(b)    IJP(c)    JD/RM	
ACC NR: AP5028680	SOURCE CODE: UR/0318/65/000/011/0025/0020
AUTHOR: Gvul'misaryan, T. G.; Gilyazetdinov, I. P.; Aksanova, E. I.; Shmeleva, R. I.; Khokhlov, B. P.; Bystrov, K. M.; Sokolova, V. V.; Sinyakina, A. V.; Abayeva, B. T.; Okinshevich, N. A.	
ORG: NIIShP; VNIINP: Novo-Yaroslavl Carbon Black Plant (Novo-Yaroslavskiy sazhevyy zavod); Volgograd Carbon Black Plant (Volgogradskiy sazhevyy zavod); Scientific Research Technological Design Institute (Nauchno-issledovatel'skiy konstruktorno- tekhnologicheskiy institut)	
TITLE: Industrial tests of new types of petroleum stock in the production of activated PM-70 furnace black	
SOURCE: Neftepererabotka i neftekhimiya, no. 11, 1965, 25-28	
TOPIC TAGS: activated carbon, petroleum product, gas oil fraction, phenol	
ABSTRACT: In order to confirm and develop the results of earlier studies which indicated that catalytic and thermal gas oil could be used in the production of activated furnace black, experimental batches of initial sulfur and hydrofined phenol extracts of catalytic and thermal gas oil were produced. The physicochemical characteristics of the new types of petroleum stock are compared with those of green oil; in the degree of aromatization they are identical, but in fractional composition, molecular weight, and viscosity, green oil is slightly lighter. In- dustrial tests confirmed that hydrofined phenol extracts of catalytic gas oil, the Card 1/2	
UDC: 66.095.21:547.21.001.5	

L00905-66

ACCESSION NR: AP5016635

are tabulated and discussed. It was established that the carbon black yield is almost the same as that obtained from pure green oil. The thermophysical properties of the gaseous reaction products of carbon black formation are compared. Vulcanizates obtained with PM-70 carbon black have a higher tear strength due to the larger specific surface and oil content. Experimental data show that a carbon black plant equipped with cyclone-type reactors and a dry system of carbon black recovery can be altered to use a mixture of gas oil and green oil. An increase in the vaporizing air flow rate leads to an increased dispersal and oil content of PM-70 carbon black and to the decrease in coking of reactors. It is recommended to increase the air flow rate to  $1.0 \text{ m}^3/\text{kg}$  oil. The addition of gas oil to green oil results in the stabilization of the granulation operation on the ASA 1 drums. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute for the Tire Industry); Novo-Yaroslavskiy sazhevyy zavod (Novo-Yaroslavl Carbon Black Plant)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, GC

NO REF SOV: 005

OTHER: 001

Card 3/3 AP

L0905-66

ACCESSION NR: AP5016635

9.5-11.8  $\times 10^{-2}$  m<sup>2</sup>/sec. The viscosity of the 1:1 mixture varies from 3.6 to 3.9  $\times 10^{-2}$  m<sup>2</sup>/sec. The kinematic viscosity plotted against heating temperature shows that the green oil and gas oil have the same viscosity only at a temperature of 280-300C. The viscosity value of 1.05  $\times 10^{-2}$  m<sup>2</sup>/sec is reached for green oil only at 100C, and for gas oil and green oil mixture at 140C. Pure gas oil has this viscosity at 185C. The high viscosity, high boiling point, and the wide fractional composition of the gas oil make it necessary to preheat it by 80-100C higher than the green oil at minimum 160C before its introduction into the reactors. The average diameter of the droplet of raw material is plotted against the vaporizing air flow rate and the temperature before the atomizer. With an increase in the air flow rate from 0.45 to 1.0 m<sup>3</sup>/kg, the diameter of the droplet decreased 2.0-2.2 times. During the experiments the gas oil content in the mixture, the heating temperature, and the specific flow rate of vaporizing air were varied. The other technological parameters were almost constant (total specific air flow rate of 4.8-5.1 m<sup>3</sup>/kg, gas flow rate of 0.25-0.28 m<sup>3</sup>/kg of raw material, reactor temperature of 1395-1400C). Tabulated data show that by increasing the air flow rate and temperature the specific surface and the oil content of carbon black were increased, while the optical density of the benzene extract of carbon black decreased. The technological data and properties of carbon black PM-70

Card 2/3

L06905-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5016635

UR/0138/65/000/006/0019/0024  
678.046.2.002.2.001.4 223

AUTHORS: Zuyev, V. P.; Gilyazetdinov, L. P.; Gyul'misaryan, T. G.; Safronov, N. B.  
Ya.; Vernshteyn, I. D.; Glagolev, V. I.; Tsygankova, E. I.; Sokolova, V. V.;  
Bystrov, K. M.; Khokhlov, B. P.

TITLE: Some peculiarities of the production of carbon black PM 70 in cyclone-type reactors by using thermocatalytic gas oil

SOURCE: Kauchuk i rezina, no. 6, 1965, 19-24

TOPIC TAGS: gas oil fraction, carbon black, catalytic cracking / PM 70 carbon black

ABSTRACT: The production of active carbon black PM-70 from a 1:1 mixture of thermocatalytic gas oil and green oil was investigated to correct certain technological parameters and to determine the behavior of carbon black during its recovery and processing. The tabulated physico-chemical properties of green oil, and their mixture show that the thermocatalytic gas oil is distinguished by a high polycyclic aromatic hydrocarbon content. The analysis of several gas oil fractions showed that its kinematic viscosity at 50C varies over a range of

Card 1/3

GYUL'MISARYAN, T.G.; FEL'DMAN, V.M.; GILYAZETDINOV, L.P.

Effect of coking properties of raw materials on the properties  
of furnace black. Nefteper. i neftekhim. no.5:29-32 '65.

(MIRA 18:7)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

2  
EWT(m)/EWP(t)/EWP(b) IJP(c) JD,  
ACCESSION NR: AP5007171 S/0206/65/000/003/0041/0041

AUTHOR: Labedev, Ye. V.; Sklyar, V. T.; Perekrest, A. N.; Gordash, Yu. T.;  
Zakupra, V. A.; Kel'chenko, V. M.; Gyul'misaryan, T. G.

TITLE: A method for producing highly aromatized material for making carbon black.  
Class 23, No. 167933

SOURCE: Byulleten' izobreteniy i tovarknykh znakov, no. 3, 1965, 41

TOPIC TAGS: carbon black, aromatic compound

ABSTRACT: This Author's Certificate introduces a method for producing highly aromatized material for the production of carbon black. The material is made from petroleum byproducts by using redistillation to isolate the hydrocarbon fraction which contains the aromatic compounds. This fraction is then extracted by furfural or phenol. In order to provide a wider choice of materials, coke distillate is used as the petroleum byproduct. The 240-460°C fraction is isolated from the distillate.

ASSOCIATION: none

Card 1/2

ZUYEV, V.P.; GILYAZETDINOV, L.P.; GYUL'MISARYAN, T.G.; BERNSHTEYN, I.D.; SAULINA, V.V.; MAGARIL, R.Z.; SFREBRYAKOV, K.F.; BORSHCHEV, B.S.

Extracts of catalytic gas oils as raw stock for the production  
of furnace black. Khim. i tekhn. topl. i masel 9 no.12:6-11 D '64.  
(MIRA 18:2)

1. Nauchno-issledovatel'skiy institut shchinoj promyshlennosti,  
Omskiy nauchno-issledovatel'skiy konstruktorskogo-tehnologicheskiy  
institut shchinoj promyshlennosti, Omskiy sazhevyy zavod i  
Kudinovskiy sazhevyy zavod.

ABAYEVA, B.T.; AGAFONOV, A.V.; GILYAZETDINOV, L.P.; GYUL'MISARYAN, T.G.;  
ZUYEV, V.P.; MOROZOV, V.I.

Testing thermocatalytic gas oil in the production of furnace black.  
Nefteper. i neftekhim. no.12:17-19 '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke  
nefti i Nauchno-issledovatel'skiy institut shchinoj promyshlennosti.

BAZMADZHIAN, R.A. (Yerevan); BELETSKIY, M.I. (Yerevan); GRIGORYAN, V.M. (Yerevan); GYUL'MISARYAN, S.A. (Yerevan); KARAUSTAYAN, T.V. (Yerevan); MAKHDYAN, L.S. (Yerevan); POGOSOVA, S.S. (Yerevan); TER-MIKAELEYAN, T.M. (Yerevan); FEL'DMAN, Ye.D. (Yerevan)

Algorithm for Armenian-to-Russian machine translating. Part 1;  
General description. Probl. kib. no.14:219-244, 1965.

1. Submitted Jan. 23, 1964.

(MINA 19:1)

53528-G!

ACCESSION NR: AP5017615

5  
tence and describe the labels used by the algorithm during the syntactic analysis and label synthesis. They also describe procedures for arriving at the correct meaning of multiple meaning words and for the identification of idioms. The article concludes with four examples of translation of mathematical texts. The authors thank V. V. Ivanov, O. S. Kulagin, I. A. Mel'chuk, T. N. Moloshnaya and V. A. Uspenskiy for their help, fruitful ideas and valuable advice." Orig. art.  
11 p., 13 formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 23 Jan 64

NO RPT Sov: 011

ENGLISH: 00

OTHER: 000

SUB CODE: DP

Card 2/2

REF ID: A65017613	DATA: 02/25/65 ACCESSION #: AB5017613	TYPE: JPN(c) UR: 2502/65/000/016/0221/0244	CLASS: S-6 S-6 S-6
AUTHOR: <u>Armenakyan, R. A.</u> (Yerevan); <u>Bekhturin, M. I.</u> (Yerevan); <u>Grigoryan, V. M.</u> (Yerevan); <u>Karapetyan, G. A.</u> (Yerevan); <u>Khavatyan, T. V.</u> (Yerevan); <u>Makaryan,</u> <u>N. S.</u> (Yerevan); <u>Ter-Ghazaryan, G. S.</u> (Yerevan); <u>Ter-Ghazaryan, T. M.</u> (Yerevan)			
TITLE: <u>An algorithm for Armenian-Russian machine translation. I (General description)</u>			
TOPIC(TAGE): <u>translation algorithm, machine translation, syntactic analysis, syntactic synthesis, token identification</u>			
ABSTRACT: <u>The algorithm for Armenian-Russian machine translation whose general description is presented in this article is based on the principle of independent analysis and synthesis. This means that during the first stage of the operation the machine carries out the grammatical and meaning analysis of the Armenian text while during the second it synthesizes the corresponding Russian text on the basis of the information obtained during the analysis. The authors outline the structure of the dictionary and the method of morphological synthesis of the Russian sentence.</u>			
Card 1/2			

53520-55

ACCESSION NR: AP5017015

usage rules must be applied. "The authors thank Mr. I. Maletskiy, R. A. Israel, D. B. Karpov, N. V. Gorbunov, V. S. Savchenko, and particularly T. M. Tsvetkov for their kind help during the work." Orig. art. has: 4  
Format: 4.5" x 6" cables.

ANNOTATION: None

SUBMITTED: 23 Mar 64

ENCL: (0)

SUB CODE: DF

NO REF Sov: 002

OTHER: 001

Card: 2/2

44-135  
SAC / HED / MTC / T/DRS/11  
P-14/P-14/P-14  
UR/2362/53/000/01/0267/0287 45

Anthony Grigoryan	V. M. (Yerevan); G. Grigoryan (Yerevan); A. P. (Yerevan); V. N. (Yerevan); V. A. (Yerevan); Z. Grigoryan (Yerevan)
C. A. (Yerevan)	
S. O. (Yerevan)	A. V. Grigoryan (Yerevan)

**TRANSLATION: An algorithm for Armenian-Russian machine translation, III (Grammatical rules and the order of their application)**

SOURCE: PUBLISHERS' INDEX, NO. 14, 1955, 267-287

**TOPIC TAGS:** translation algorithm, machine translation, syntactic analysis, syntactic synthesis

**ABSTRACT:** This is the third part of a comprehensive description of an algorithm for Armenian-Russian machine translation (for the first two parts see *Problemy Kibernetiki*, no. 4, 1965, 221-244 and 245-266). The translation process follows four separate stages: morphological analysis, syntactic analysis, syntactic synthesis, and morphological synthesis. In this part, the authors present a complete description of all the grammatical rules used for the establishment of the syntactic analysis and the syntactic synthesis, and discuss the order in which

Card 1/2

L 10903-66

ACC NR: AP6004499

similar to methods previously developed by M. S. Agranovich and M. I. Vishik. The author dwells in detail on the case in which the coefficients of the operators of the elliptic problem are constant, the operators themselves are homogeneous, and the boundary conditions are given in the hyperplane  $x_n = 0$ . The author thanks Professor M. I. Vishik for raising problems and for valuable instruction. Orig. art. has: 54 formulas. JPRS

SUB CODE: 12 / SUBM DATE: 24Apr64 / ORIG REF: 011

PC  
Card 2/2

I 10903-6 EMT(d) LIP(c)  
ACC NR: AP600/499

SOURCE CODE: UR/0022/65/018/001/0014/0033

44, 55  
AUTHOR: Gyul'misaryan, A. G.

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: General boundary value problems for parabolic equations with discontinuous  
coefficients

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 1,  
1965, 14-33

TOPIC TAGS: boundary value problem, parabolic differential equation, existence  
theorem, uniqueness theorem, isomorphism, mathematic space, elliptic differential  
equation, operational calculus

ABSTRACT: The article proves a theorem for the existence and uniqueness in  
spaces  $E_1, 1/2b$  of a stationary (elliptic) problem and then, using the isomorphism  
of spaces  $E_1, 1/2b$  and  $P_1, 1/2b$ , obtains the single-valued solvability of a para-  
bolic problem in spaces  $P_1, 1/2b$ . The solvability of the elliptic problem is  
proved in general as follows: proof of the a priori evaluation and existence is  
first given for the case of homogeneous operators  $A_j^1, B_j, C_j, R_j$  with constant  
coefficients in a half-space; then these results are applied to the case of  
operators with slightly-changing coefficients, and a final result is obtained  
for operators with variable coefficients. The methods used by the author are

Card 1/2

26/25

Some homogeneous boundary value problems... S/020/61/138/006/001/019  
C111/C222

for all  $k = 0, 1, 2, \dots$  is different from zero.

The authors mention R.A. Aleksandryan whose paper (Ref. 2: DAN 73, no. 5 (1950)) is essentially used for the proof of the theorems. There are 3 Soviet-bloc references.

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk Arm SSR (Computing Center of the Academy of Sciences Armyanskaya SSR)

PRESENTED: February 15, 1961, by S.L. Sobolev, Academician

SUBMITTED: December 27, 1960

X /  
Card 3/3

29325

Some homogeneous boundary value problems S/020/61/138/006/001/019  
C111/C222

Theorem 1: Let  $D$  be the circle  $x^2 + y^2 = 1$ . Then the eigenfunctions of (1), (3) are complete in  $L_2(D)$ .

Theorem 2: Let the region  $D$  be the circle  $x^2 + y^2 \leq 1$ . Let  $c \neq 0, -1, \dots, -k, \dots$ . Then the eigenvalues of (1) with

$$u|_{\Gamma} = 0 \quad (2)$$

are also eigenvalues of (1) with

$$L_1 u|_{\Gamma} = \left[ cu + \frac{\partial u}{\partial n} \right]_{\Gamma} = 0. \quad (3*)$$

The eigenfunctions of (1)-(3\*) are complete in  $D$  in the class of continuous functions in the sense of the uniform convergence. An analogous theorem holds for the boundary condition

$$L_1^* u(x, y)|_{\Gamma} = \sum_{i=0}^n c_i \frac{\partial^i u(x, y)}{\partial n^i}|_{\Gamma} = 0 \quad (n \geq 1),$$

if the expression

$$c_0 + kc_1 + k(k-1)c_2 + \dots + \frac{k!}{(k-n)!} c_n$$

Card 2/3

25325

16.3500

S/020/61/138/006/001/019  
C111/C222

AUTHORS: Arutyunyan, Ye.A., Gyul'misaryan, A.G., and Ovsepyan, S.G.

TITLE: Some homogeneous boundary value problems for the string vibration equation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 6, 1961, 1255-1258

TEXT: In the region D with the boundary the authors consider the problem

$$u_{xx} - \lambda^2 u_{yy} = 0, \quad (1)$$

$$Lu|_f = 0, \quad (3)$$

where the operator L has the form

$$L = \sum_{i+j=0}^n c_{ij} \frac{\partial^{i+j}}{\partial x^i \partial y^j}; \quad (4)$$

here  $c_{ij}$  are constants,  $c_{00} \neq 0$ , and n is a natural number. A number  $\lambda$ , for which there exists a function  $u_\lambda(x,y)$  satisfying (1), (3), and  $Lu_\lambda(x,y) \neq 0$ , is called an eigenvalue of (1), (3).

Card 1/3

GASANOV, B.I.; GYUL'MARADOV, R.G.

Soil and climate conditions for the cultivation of the hair cork tree in the Zakataly zone. Izv. AN Azerb. SSR. Ser. biol. no.4: 91-97 '64. (ИЗРА 17:12)

GYULIMAMEDOV, R.G.

Effect of soil types on the yield of hornbeam forests in the  
Greater Caucasus (Ismailly and Agdash) within the Azerbaijan  
S.S.R. Izv. AN Azerb. SSR. Ser. biol. i med. nauk no. 145-19  
164. (VIA 17:6)

GYUL'MAME DOV, R. G.

GYUL'MAME DOV, R. G.

USSR/Forestry - Forest Cultures.

K.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15405

Author : R.G. Gyul'mamedov

Inst : The Azerbaijhan Scientific Research Institute for  
Forestry and Agricultural Forest Melioration.

Title : The Cultivation of Plantations of Rapid Growing Species  
on Mil'skaya Steppe's Irrigated Soil by Graft Implanta-  
tion.  
(Vyrashchivaniye nasazhdennykh bystrorastushchikh porod na  
oroshayemykh zemlyakh Mil'skoy stepi putem posadki chere-  
nkov).

Orig Pub : Byul. nauchno-tekhn. inform. Azerb. n.-i. in-ta lesn.  
kh-va i agrolesomelior., 1957, No 1-2, 35-39.

Abstract : The adaptability and development of the root system in  
grafts of the Canadian poplar, and hybrid poplar, the

Card 1/2

38

ZYULINAMETOV, N. G.

ZYULINAMETOV, N. G. -- "The Creation of Forest Plantations under Conditions of the Mill'skaya Steppe of the Azerbaydzhan Soil by Planting Cuttings under Irrigation." Fin Higher Education USSR. Saratov Agricultural Inst. Saratov, 1955. (Dissertation for the degree of Candidate in Agricultural Sciences)

SC: Knizhnaya Letopis', No 1, 1956

GYUL'MAMEDOV, I.I.

Determining the inductive resistance of asynchronous motors. Izv.  
AN Azerb. SSR Ser. fiz.-mat. i tekhn. nauk no.3;121-128 '60.

(Electric motors, Induction)

(MIRA 13:11)

GYUL'MAMEDOV, I.I.

Determining the switching moment and the starting stages for the rheostat of an asynchronous motor with automatic control. Izv. AN Azerb.SSR.Ser.fiz.-mat.i tekhn.nauk no.5:109-112 '60

(Electric rheostats) (Electric motors, Induction) (MIRA 14:4)



GYUL'MAMEDOV, I.I.

Analytical method for determining the operating possibility  
of deep-bar and multiple-cage motors fed by an independent  
generator. Izv.AN Azerb.SSR,Ser.fiz.-mat.i tekhnauk no.4:  
77-81 '59.

(Electric motors, Induction) (MIRA 13:2)

OSMANOV, Z.O.; GYUL'MAMEDOV, I.I.

Using a power relay for controlling the operation of deep wells  
[in Azerbaijani with summary in Russian]. Azerb. neft. khoz. 37  
no.7:45-46 Jl '58.

(Electric relays)

(MIRA 11:9)

OPTIONAL FORM, I.I., Item 7c, Series (d)(1) "An Analysis of the  
characteristics of static discharge and the insulation  
of dielectric materials to facilitate the removal of  
AC. <sup>down 84</sup> of insulation  
of dielectric materials to facilitate the removal of insulation  
of insulation  
" (in, 100). 14 pp. In original and three copies. Correspondence Order  
of Box and Number 144-100-144-144 (see A.S. below), 100 copies.  
(E, 22-51, 100)

GYUL'MAMEDOV, I.I.  
GYUL'MAMEDOV, I.I.

Method of calculating starting resistance of asynchronous motors  
fed from autonomous generators. Izv. AN Azerb. SSR no.11:7-18  
'57. (MIRA 11:1)  
(Electric motors) (Electric rheostats) (Oil well drilling)

GYUL'MAMEDOV, I.I.

Determining the power of electric motors used for hoisting winches.  
Energ. biul. no.5:1-2 My '57.  
(Winches) (MLRA 10:6)

GYUL'MAMEDOV, I.I.

Determining the static characteristics of alternating current  
Diesel-electric drive. Dokl.AN Azerb.SSR 12 no.12:949-954 '56.  
(MLRA 10:8)

1. Institut energetiki Akademii nauk Azerbayzhanskoy SSR. Predstavлено  
академиком Akademii nauk Azerbayzhanskoy SSR M.F.Nagiyevym.  
(Diesel engines) (Oil well drilling)

ALIZADE, A.S.; GYUL'MAMEDOV, B.A.; SEL'MYANSKIY, V.L.; ALIYEV, A.A.;  
KEGAMYAN, V., red. izd-va; ISMAYLOV, T., tekhn. red.

[Hydroelectric power resources of the Azerbaijan S.S.R.]  
Gidroenergeticheskie resursy Azerbaidzhanskoi SSR. Baku, Izd-  
vo Akad. nauk Azerbaidzhanskoi SSR. Vol.2. 1961. 160 p.

(MIRA 15:3)

1. Akademiya nauk Azerbaidzhanskoy SSR, Baku. Sovet po izucheniyu proizvoditel'nykh sil.

(Azerbaijan--Hydroelectric power)

## PHASE I BOOK INFORMATION

Sov/EAST

Akademiya Nauk SSSR. Energeticheskaya Instituts im. G.M. Krzhizhanovskogo  
 Problemy energetiki: Obshchiy pozyashchennyi akademii G.M. Krzhizhanovskogo  
 (Problemy of Power Engineering). Collection of Articles Dedicated to Academician G.M. Krzhizhanovskiy. Moscow, 1959. 651 p. Printed in Soviet Union.  
 2,500 copies printed.

Eds. of Publishing House: R.D. Arzumanyan, P.V. Dubrov, P.I. Zobkov, and  
 G.M. Myagkov; Tech. Ed.: T.A. Petukhova; Editorial Board: A.V. Vinograd,  
 A.N. Kostylev (Chairman), V.L. Popkov (Resp. Ed.) Corresponding Member,  
 R.F. Chumakov, V.I. Voz, A.S. Prokof'yev, M.A. Sviridov, Candidate  
 of Technical Sciences, K.B. Bogdanov, Candidate of Technical Sciences, B.K. Kostylev,  
 Candidate of Technical Sciences, N.M. Ishober, Candidate of Technical Sciences,  
 and I.M. Smidov.

PURPOSE: This collection of articles is intended as a tribute to the memory  
 of Academician G.M. Krzhizhanovskiy.  
 CONTENT: The collection contains thirty articles by former students and  
 co-workers of the deceased Academician. The articles deal with problems  
 of a wide range of subjects in the field of power engineering. Problems  
 of the regional development of electrical and thermal power engineering,  
 power engineering technology, and the physics of combustion. So personalities  
 are mentioned. References are given after most articles.

Contents: On Ch. Power Engineering and the Science of Power Engineering is  
 22  
 Al'tseder, A.A., Z.I. Gribel'man, and V.I. Sel'skivsky. Development  
 of Hydropower Engineering in Azerbaijan SSR 27  
 Shmelevskiy, P.G. Most Important Problems of Building Power Systems  
 in the Georgian SSR in Connection With the Unification of Power  
 Systems of the Caucasus 32

Flade, I.E. Problems of Power Engineering in the Studies of the  
 Academy of Sciences of the Latvian SSR 36  
 Yark, I.E. Studies of the Power Engineering Institute of the Estonian  
 Academy of Sciences in the Field of General Power Engineering 42  
 Slobor, S.E. Belarus Power Engineering Research Institutions by the  
 Power Engineering Institute Leningrad G.M. Krzhizhanovskiy, Academy of  
 Sciences USSR 49

Probst, A.I. Power Engineering and Distribution of Manufacturing  
 Enterprises 57  
 Reznikov, A.S. Some Problems on the Effects of Power Engineering on  
 Agricultural Specialization in Agricultural Regions of Eastern Siberia 65  
 Radinov, A.G. Prospects of Utilizing the Lena River and its  
 Tributaries for Power Engineering Development 73

Imurov, V.D. Basic Considerations of Electric Power Supply Systems  
 for Rural Regions of Kirgizia SSR 77

Ovchirich, B.A. Utilizing the Capacity of Power Systems and Conditions  
 of Operation Under Load 89  
 Kolosov, I.S. Problems of Prospective Planning of Distribu-  
 tion of the Energy Reserve Among Electric Power Stations of the  
 System 100

Izobedov, M.M. Principles in Layout Out Electric Distribution Networks  
 108

Dmitriev, V.V. Some Problems in the Transmission of Electrical  
 Energy Over Extremely Long Distances 119

Krasil'nikov, S.A. Some Scientific and Technical Problems in Improving  
 Energy Characteristics of Hydropower-Station Equipment:  
 Mikhlin, B.I. Developing Guaranteed Graphs of Reservoir Utilization  
 for Several Hydropower Stations Operating in a Cascade Connected With  
 the Water Economy. A.H. Calculated Equations and Indices for Comparative  
 Evaluation of the Power of Various Types of Extraction Macromodeling  
 Type Turbines 129

Loventhal, J.B. Basic Principles of Joint(Parallel) Operation of  
 District Heat-and-Power Stations in the Production of Thermal Energy 135

GYULLIN G. V. F.  
CYULLING, V., inzhener.

Selecting the type of structure for spanning dry stream beds  
and gullies. Avt.transp. 32 no.1:22-23 Ja '54. (MLRA 7:8)  
(Bridges) (Culverts)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000617800050-6

GYULLING,V.E.

Special case of bridge location. Avtodor.17 no.3:22 N-D'54.  
(Bridge construction) (MIRA 8:10)

VINOGRADOV, G.I.; GRUTMAN, M.I.; GYULLING, E.V., (Kiyev)

Mechanism of a secondary drop in erythrocyte count and hemoglobin in high mountain areas. Pat. fiziol. i eksp. terap.  
6 no.6:27-29 N-D'62  
(MIRA 17:3)

1. Iz laboratorii sravnitel'noy i vozrastnoy fiziologii (rukovoditel' - deyatvitel'nyy chlen AMN SSSR prof. N.N.Sirotnin) Instituta fiziologii imeni A.A.Bogomol'tsa.

GYUL'INOV, E. V.

Study of the allergization of the organism of patients with chronic tonsillitis to streptococci by the method of passive anaphylaxis. Zhur. ush., nos. i gor. bol. 24 no.1:52-54  
fa.-5 '64. (MGRI 19-3)

1. Iz laboratoriia fiziologi i patologii otolaringologicheskikh orgenov (zav. doktor med. nauk V. A. Sykhanin) nauchno-issledovatel'skogo instituta otolaringologii Ministerstva zdravookhraneniya UkrSSR (dir. nauchn. ruk. zasluzhennyi deyatel' nauch. prof. V. V. Slobodchikov).

JUL'KASYAN, Sh.A.

Designing a dwelling for the collective farm resident of the  
low-lying districts of Armenia. Trudy Arm. inst. stroimat. i  
soor. no.1:293-304 '59. (MIRA 14:12)  
(Armenia--Farmhouses)

GYUL'KHASHYAN, Sh., arkitektor.

Practice in building round dairy barns in the Armenian S.S.R.  
Sel'stroi. 11 no.12:21-22 D '56. (MLRA 10:2)

(Armenia--Dairy barns)

GYUL'ZH.YAN. M.

Aftereffect of fertilizers applied to tobacco in Arsharav district,  
Armenian S.S.R. (in Armenian with summary in Russian). Izdat. nauchno-tekhnicheskikh sushchestvovaniy. Nauka i Tekhnika. (Armenia)  
(Arsharav district-Fertilizers and manures)  
(Tobacco)

GYUL' KHASYAN, M.A.

Effect of fertilizers on the Samsun 27 tobacco variety in Ashtarak  
District of the Armenia S.S.R. [in Armenia with summary in Russia]  
Izv. Anarm. SSR. Biol. i sel'skhoz. nauki 9 no.8:79-90 Ag '56.  
(ARMENIA--TOBACCO) (MLRA 9:10)  
(FERTILIZERS AND MANURES)

GYUL'KASYAN M. A.

"Study of Some Problems of the Thickness of Sand and Fertilization of Tobacco of the 'Samsun 27' Variety Under Conditions in Ashtarakskiy Rayon of the Armenian SSR." Cand Agr Sci, Armenian Agricultural Inst, Min Higher Education USSR, Yerevan, 1955. (KL, No 11, Mar 55)

SO: Sum. No. 670, 29 Sep 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

1. GYUL'KHASYAN, M. A.
2. USSR (600)
4. Tobacco
7. Leading tobacco growing collective farm. Tabak 13 no. 6, 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

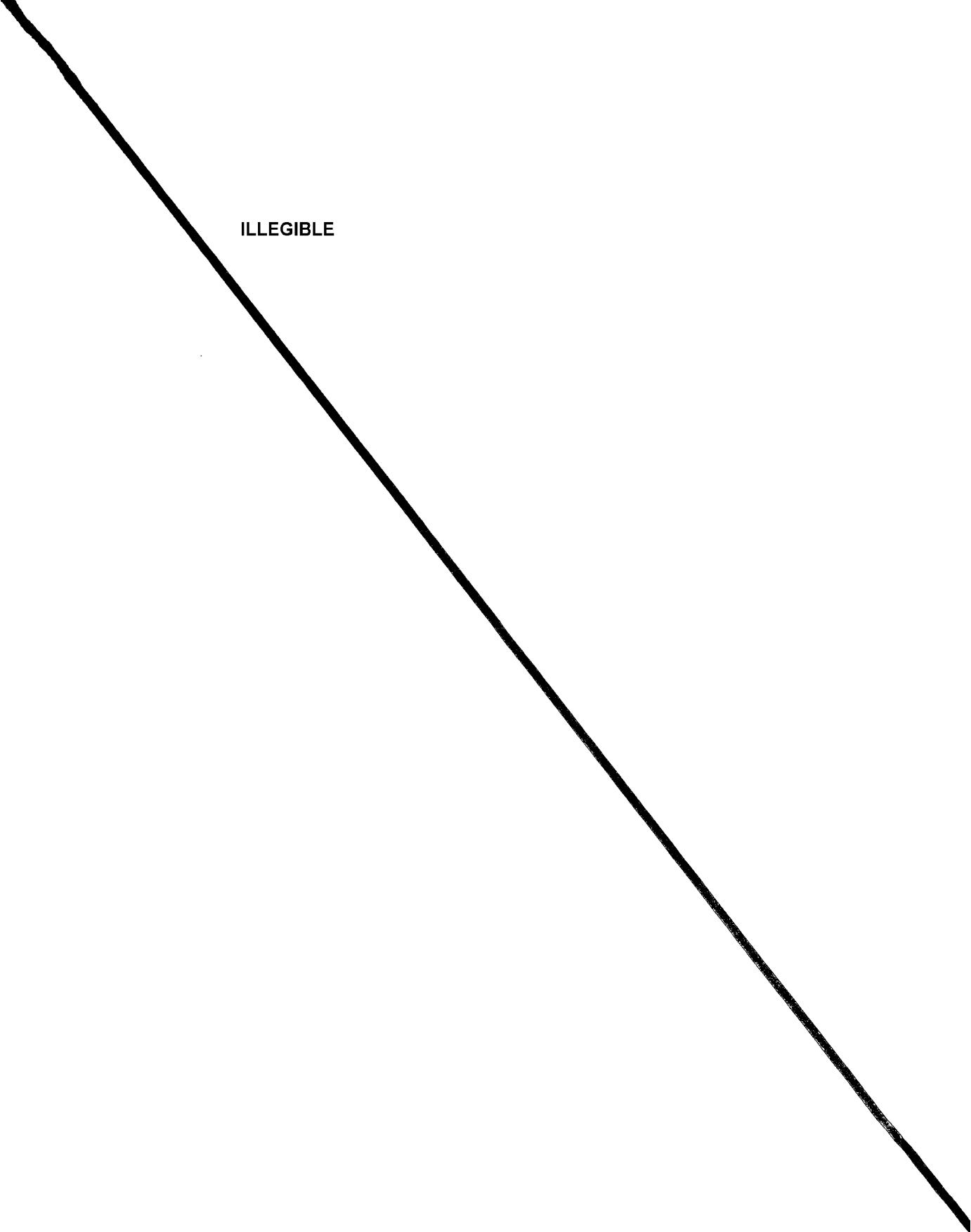
GYULKHASYAN, G.

Problems in fulfilling the plan for gas supply in Eriwan.  
From Arm. 4 no. 3:14-18 Mr '61. (MIRA 14:6)

1. Glavnnyy inzh. po gazosnabzheniyu goroda Yerevana institut  
"Yerevamprojekt."  
(Eriwan--Gas companies)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000617800050-6

ILLEGIBLE



ARUTYUNOV, A.A., professor; GYULKHASIAN, A.A.; SHUKURYAN, K.G., kandidat meditsinskikh nauk; AGARONYAN, Dzh., kandidat meditsinskikh nauk; BEGLIARYAN, A.G., dotsent

[Some experimental data on the pathogenesis of tonsillitis. Vest. oto-rin. 18 no.5:17-22 S-0 '56. (MLRA 9:11)

1. Iz kliniki bolezney ukha, gorla i nesa (zav. - prof. A.A.Arutyunov), iz kafedry mikrobiologii (zav. - dotsent V.T.Gabriyelyan) Erevanskogo meditsinskogo instituta.

(TONSILLITIS, exper.  
pathogen. develop. in dogs & rabbits)

GYUL'KASYAN, A.A.

Tissue therapy in deafness. Vest.oto-rin. 16 no.1:85 Ja-F '54.  
(MIRA 7:3)

1. Iz kliniki bolezney ukha, gorla i nosa (zaveduyushchiy - professor A.A.Arutyunov) Yerevanskogo meditsinskogo instituta.  
(Tissue extracts) (Deafness)

GYUL'KHANDANYAN, Z.G.

BURNAZYAN, R.A., inzh.; GYUL'KHANDANYAN, Z.G., kand. tekhn. nauk.

"Fundamental problems in the economics of building" by B.IA. Ionas.  
Reviewed by R.A. Burnazian, Z.G. Giul'khandanian. Stroi. prom. 36  
no.1:48 Ja '58. (MIRA 11:1)

(Construction industry)

(Ionas, B.IA.)

GYUL'KHANDANYAN, V. G.

Gyul'khandanyan, V. G.

"Investigation of Certain Problems of the Power Balance and Coefficient of Useful Effect of Lathes." Min Higher Education USSR. Yerevan Polytechnic Inst imeni K. Marks. Yerevan, 1955. ( Dissertation for the Degree of Candidate in Technical Sciences.)

Knizhnaya Detorist'; No. 27, 2 July, 1955

GYULIKHANOV, L.Ye.

Cleaning equipment. Adm.-byt. komb. ugol'. shakht. no.4:63-66  
'61. (MIRA 15:8)

1. Akademiya kommunal'nogo khozyaystva im. K.D.Pamfilova.  
(Cleaning machinery and appliances)

ACC NR: AT7004520

the ambient media used; against a 20-30% decrease in the tensile strength of the as-rolled sheets, the elongation increased from 1.0-2.0% to 3-7% and the "depth of cup" in Erickson ductility tests increased from 3.0 to 4.2 mm. Annealing for longer than 15 min brought about no marked changes in the mechanical properties and microstructure. Changes in the alloy strength level with annealing at 1150-1250°C were practically independent of the ambient media, although a decrease in elongation was observed in sheets annealed in hydrogen and in vacuum. Full recrystallization of strain-hardened sheets occurred at 1350-1400°C. This resulted in a 40-70% decrease in the strength, while an appreciable anisotropy of the properties sharply impaired the workability of the material. Recrystallized sheets had an uncocrystallized surface layer 0.04-0.07 mm thick, which constituted 20-40% of the cross section area of the investigated sheets. This layer, resulting probably from contamination of the surface layers in rolling molybdenum alloys in the air, significantly impaired the mechanical and technological properties of the material. Formation of this layer can be prevented by rolling the material in an inert atmosphere or by removing the material after hot pressure working. Orig. art. has: 3 figures and 4 tables.

[MS]

SUB CODE: 11, 13/ SUBM DATE: none/ ATD PRESS: 5116

Card 2/2

ACC NR: AT7004520

SOURCE CODE: UR/2563/66/000/268/0052/0058

AUTHOR: Bogoyavlenskiy, K.N.; Gyulikhandanov, Ye.L.; Ris, V.V.;  
Khoroshaylov, V.G.

ORG: none

TITLE: Investigation of TsM-2a molybdenum alloy

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 268, 1966.  
Metallovedeniye (Metal science), 52-58

TOPIC TAGS: molybdenum alloy, cold-rolled alloy, alloy strength, alloy  
ductility, ~~alloy annealing~~, alloy microstructure/TsM2a alloy

ABSTRACT:

Experiments have been made to improve the poor ductility of cold-rolled TsM-2a molybdenum-alloy sheets, 0.2, 0.3 and 0.5 mm thick, used for forming intricate parts. To determine the effect of the annealing temperature, time and ambient media on mechanical properties and microstructure, test specimens were cut from the sheets along and at 45 degrees to the direction of rolling, and annealed for 15 min in argon at 1100–1200°C, in hydrogen at 1100–1400°C, or in a vacuum of  $10^{-3}$  and  $10^{-5}$  mm Hg at 1100 to 1250 and 1250–1450°C, respectively. Annealing at 110–1150°C for 15 min produced the best combination of mechanical properties, regardless of

Card 1/2

UDC: none

ACC NR: AT7003262

At the same time, the elongation increased from 1-2.5% for as-rolled alloy to 23-24% for specimens cut at an angle of 45°, and 15-19% for longitudinal and transverse specimens annealed at 1200C. A considerable anisotropy of mechanical properties was observed in annealed specimens. Specimens cast at 45° to the direction of rolling had a lower strength and a higher ductility than longitudinal and transverse specimens. The best combination of mechanical and technological properties of niobium-alloy sheets was attained by vacuum annealing (not in argon) at a temperature of 1100-1150C. Thin-wall shapes can be formed from VN-2 alloy sheets 0.2 or 0.5 mm thick by bending, if the bend radius is maintained equal to or greater than the sheet thickness. Orig. art. has: 2 tables[ND]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002/  
ATD PRESS: 5115

Card 2/2